

**REMARKS**

Claims 1-5, 7-9, 11-13 and 17-19 are pending. Applicants wish to point out that in the October 30, 2008 Office Action, claim 2 as well as claims 7-9, 11, 12 and 17-19 had been identified as withdrawn. However, the August 14, 2009 Office Action lists claim 2 as pending and not withdrawn. Thus, claims 1-5 and 13 are understood to be under examination. Claim 1 has been amended to specify that when  $n$  (the number of spacer molecules) is not 0,  $m$  (the number of nutrient molecules)  $\geq p$  (the number of MRI detectable moieties) and  $n$  (the number of spacer molecules)  $\leq m$  (the number of nutrient molecules). This amendment is supported throughout the specification, particularly at paragraphs 0040 and 0070 and Examples 8 and 11 (where the number of nutrient molecules equals the number of detectable moieties) and Examples 1-7 and 9-10 (where the number of nutrient molecules is greater than the number of detectable moieties). No new matter was added.

**Response to Amendment/Argument**

Applicants are grateful for the Examiner's withdrawal of all outstanding earlier rejections

**New Grounds of Rejection Under 35 U.S.C. § 103(a)**

Claims 1-5 and 13 were rejected for alleged obviousness over Gozzini et al (US Patent No. 6,719,958 - "Gozzini"). The examiner asserts that it would have been obvious "to have a composition comprising a spermidine (the variable  $N$  and  $m=1$ ); multiple chelating moieties (the variable  $D$  and  $p=4$ ); and no spacer group (the variable  $S$  and  $n=0$ ) since Gozzini et al disclose polychelant compounds capable of being complexed with a metal that encompass the instant invention." OA, p. 4. Applicants respectfully traverse.

As an initial matter, Applicants note that in all of the compounds disclosed in Gozzini the polyamine organic molecule  $L$ , carrying " $m$ " primary amino groups such as spermidine are bound to the chelating moiety  $K$  through the  $-CH_2$  group of  $-CH_2-T-K$ . In contrast, in the

instant invention in the case the Examiner has posited, where  $n$  is 0 and thus  $S$  is not present, the detectable moiety  $D$  is attached directly to the nutrient  $N$ . Thus, the Gozzini compounds are outside the instantly claimed invention when  $n$  is 0.

Furthermore, even when  $n$  is not 0 and a spacer is present, Gozzini fails to render the claims obvious. Gozzini is directed to polychelates obtained from an organic polyamine backbone  $L$  which carries from 2 to 1000 primary amino groups that are alkylated, via reductive alkylation, with from 3 to 2000 chelant/chelated residues. Thus, the Gozzini compounds must include 3 or more chelator residues and the number of chelator residues must be greater than the number of alkylated polyamine groups. See e.g. Gozzini, Col. 4. In contrast, in the current application the number of detectable moieties (e.g. chelator residues) is equal to or less than the number of nutrient moieties  $N$ . Thus, the currently amended claims require that when a spacer is present,  $m$  (the number of nutrient molecules)  $\geq p$  (the number of MRI detectable moieties) and  $n$  (the number of spacer molecules)  $\leq m$ , compounds neither taught nor suggested by Gozzini.

Furthermore, Gozzini fails to teach or suggest the advantages of the claimed invention. The nutrient molecules of the claimed compounds are able to be recognized by the nutrient/pseudonutrient transporters present on cells in the body. These transporters internalize the compounds of the invention (including the detectable label) into the cells, allowing imaging. Gozzini neither teaches nor suggests compounds with this advantage. Indeed, Gozzini effectively teaches away from the instant invention at col. 2 lines 56-65 and col. 1 lines 51-61 in suggesting that the biological activity of the polyamino groups of  $L$  is problematic and should be minimized. Thus, Applicants submit that Gozzini fails to render the instant claims obvious.

Having addressed all outstanding rejections, Applicants submit that the presently pending claims are in condition for allowance. Applicants therefore request the speedy issuance of a notice of allowability.

No fee is believed to be necessary in connection with the filing of this Amendment and Response. However, if any additional fee is necessary, applicant hereby authorizes such fee to be charged to Deposit Account No. 50-2168.

Favorable action is respectfully requested.

Respectfully submitted,

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